

- **Prevent secondary complications** such as tissue breakdown and respiratory problems.

If the boy undergoes spinal surgery, his ability to weight shift to relieve pressure is decreased. The weight-bearing pressures may actually be increased following surgery, because, in many cases, the weight is brought back over the pelvis when the spine is aligned. Therefore, seating must help with pressure relief, such as, tilting the seating system and modifying the pressure-relief cushion.²²

Seating Intervention^{11,24,27}

In the early stages of DMD, when the boy has **mild weakness**, less support is needed. During this period, the boy may only need a firm flat seat cushion, plus adding some pelvic, hip and thigh supports such as gentle contours on the seat cushion. Assess each boy individually. Remember, it is essential to maximize function and independent mobility.

For a child with **moderate weakness**, it becomes important to support the boy's weakened pelvis and trunk, so that the child can rest these areas in a good posture while using his hands, legs, and head to function. Use a seat cushion and back support with appropriate postural supports. Consider an elastic anterior abdominal support,²⁴ binder, or corset to support the weak abdominal muscles, so that he does not need to lean on his legs or laptray to function. An anterior abdominal support can also prevent too much anterior pelvic tilt and lumbar lordosis (see page 149). At this point, or even sooner, consider power tilt and recline. Often boys with DMD need to lean forward for better arm function. However, with the powerful effect of gravity and weakened abdominal muscles, the hip flexors get very tight, leading to more anterior tilt and lumbar lordosis. Power recline and tilt can allow the boy to rest, stretch the *hip flexor muscles*, and allow for easier urinal use.²²

When a boy develops **significant weakness and involvement**, it is important to help him to stay in his chair as long as possible and use whatever function is available. Consider power mobility, recline, and tilt, as well as appropriate seating supports. If scoliosis develops, lateral pelvic and trunk supports, a molded seating system, or an orthosis may support the trunk. If the seating system is too rigid, it may interfere with the boy's activities of daily living. Overall, the team must find the balance between seating supports and important functional activities. In the later stages of muscular dystrophy, consider the need to relieve pressure with pressure-relief cushions, tilting, or reclining the seating system. At this point, a caregiver or mechanical lift will be needed for transfers. The seating system should accommodate for this situation. It should also accommodate for urinals. As the disease progresses, tilting the system is important for comfort, fatigue, and relief from the gravitational forces on the spine. One of the few blessings with DMD is that the musculature around the mouth is often spared, making it a dependable control site for many years.²² Older, ventilator-dependent young men may use mini joysticks with very